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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hartmut Schumacher

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EXAMINER

RUTLAND WALLIS, MICHAEL

ART UNIT

PAPER NUMBER

2836

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/590,876	<b>Applicant(s)</b> SCHUMACHER ET AL.	
	<b>Examiner</b> MICHAEL RUTLAND WALLIS	<b>Art Unit</b> 2836	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                         | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground of rejection. The previous Specification objections have been withdrawn.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Claim 7 has been amended to recite the newly added limitation "a voltage regulator directly connected to the energy reserve", however this Appears to be in contrast to the originally disclosed circuit connection. This states (Page 4 lines 15-20 substitute specification) "The ignition current comes from energy reserve ER." However, the ignition current must first flow via a polarity reversal protection diode 109 and safety semiconductor 102 to reach the ignition power modules

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in ignition circuit trigger 107.” This description is consistent with illustration of the figure, however differs from the newly claimed configuration of the voltage regulator being *directly connected* to the energy reserve.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended claim 7 to recite the newly added limitation “a voltage regulator directly connected to the energy reserve”, however in contrast to the recited claimed connection the drawings show at least intervening circuit element 109. Therefore is not clear what Applicant intends by directly connected.

Claim 12 is unclear as it appears to be in conflict with the connection recited in claim 7. If the voltage regulator is directly connected to the energy reserve, such a recitation raises the question, how can a diode be situated between the energy reserve and the voltage regulator.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7, 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Davis et al. (U.S. Pat. No. 5,898,122)

With respect to claim 7 and 10 Davis teaches a device (Fig. 2) for supplying an ignition current from an energy reserve to at least one ignition power module, comprising: a voltage regulator (item 22 and/or 21) directly connected to the energy reserve (item 23) and the at least one ignition power module (item 24 and/or 33) such that the voltage regulator sets a voltage (voltage at node 31) at the at least one ignition power module at a predetermined level (col. 4 lines 30-40) a control module (item 25) which selectively triggers the voltage regulator to alternatively operate as a safety semiconductor (for example disabled state no energy in energy reserve).

With respect to claim 12 Davis teaches a polarity reversal protection diode (for example item 26) situated between the energy reserve and the voltage regulator.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. (U.S. Pat. No. 5,898,122) in view of Smith et al. (U.S. Pat. No. 5,845,729) Davis teaches the voltage regulator is disconnectable (via removal of power or disabling the connection of the power from the supply) and allows an electric current to be supplied to the at least one ignition power module, however Davis does not teach the use of an external microcontroller. Smith teaches the use of a microcontroller (item 28) external to the drive and power modules. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Davis to supply power to the ignition module as a function of the microcontroller in order to allow for connection of sensors and other feedback to be monitored to determine when to control the power to the ignition module.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. (U.S. Pat. No. 5,898,122) in view of Smith et al. (U.S. Pat. No. 5,845,729) in view of Ravas, Jr. et al. (U.S. Pat. No. 5,459,449) Davis teaches the device of claim 8, however does not teach the further limitation of diagnosis as recited. Ravas 449 teaches a diagnosis (item 44) is provided for a safety semiconductor (item 20 or 34). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Davis to include the diagnosis of the device in order to allow for testing to insure proper operation of the device.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. (U.S. Pat. No. 5,898,122) in view of Ravas, Jr. et al. (U.S. Pat. No. 5,459,449) Davis teaches the device of claim 7, however does not teach the further limitation of diagnosis as recited. Ravas 449 teaches at least one current source (item 30) assigned to the

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voltage regulator (item 22) for diagnosis (col. 2 line 65) of the at least one ignition power module. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Davis to include the diagnosis of the device in order to allow for testing to insure proper operation of the device.

### ***Conclusion***

Applicant's amendment necessitated the new ground of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Rutland-Wallis whose telephone number is 571-

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272-5921. The examiner can normally be reached on Monday-Thursday 7:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jared Fureman can be reached on 571-272-2391. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRW  
/Albert W Paladini/  
Primary Examiner, Art Unit 2836

1/19/10